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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS & INTERFERENCES

Serial No.	:	09/997,673	Confirmation No.: 4596
Applicant	:	Mou-Chung Ngai	
Filed	:	November 29, 2001	
TC/A.U.	:	1771	
Examiner	:	Jeremy R. Pierce	
Title	:	Bi-Functional Nonwoven Fabric Wipe	
Docket No.	:	PGI6044P0231US	
Customer No.	:	32116	

Mail Stop Appeal Brief - Patents
Commissioner For Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

RESPONSE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

Sir:

Responsive to the Notification mailed April 19, 2006, applicant submits herewith his revised Appeal Brief. Revisions have been effected in accordance with the Examiner's Notification, and in accordance with 37 C.F.R. §41.37. Entry is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees which may be required in connection with this submission to Deposit Account No. 23-0785.

Respectfully submitted,

By _____
Stephen D. Geimer, Reg. No. 28,846

WOOD, PHILLIPS, KATZ, CLARK & MORTIMER
500 West Madison Street, Suite 3800
Chicago, Illinois 60661-2511
312/876-1800

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service with sufficient postage at First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on **May 16, 2006.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
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APPEAL BRIEF (Second Revision)

Sir:

Applicants are filing this Appeal Brief within two (2) months of the Notice of Appeal filed September 19, 2005, with the appropriate fee according to 37 C.F.R. §1.17(c). If the amount included is incorrect, you are authorized to charge the appropriate amount from Deposit Account No. 23-0785. This Brief is enclosed in triplicate, as required by 37 C.F.R. §1.192.

Real Party in Interest

The real party in interest for application Serial No. 09/287,673 is Polymer Group, Inc., 4055 Faber Place Drive, Suite 201, North Charleston, South Carolina 29405.

Related Appeals and Interferences

As of the filing of this Brief, there are no known related appeals or interferences that would directly affect or be directly affected by, or have a bearing on, the Board's decision in this appeal.

Status of Claims

Claims 22-28, the only claims pending in this application, are rejected under 35 U.S.C. §112, and §102(e)/103(a).

Status of Amendments

There have been no amendments subsequent to the final rejection of the present case.

Summary Of Claimed Subject Matter

As recited by independent claim 28 (the only independent claim which is presently pending), the present invention is directed to a nonwoven fabric wipe (10) having adhesive binder (18) applied to one expansive surface thereof, whereby that one surface of the wipe is more abrasive than the opposite expansive surface to facilitate use such as for cleaning surfaces (see Specification, page 2, lines 7-16; page 3, lines 1-8; page 5, lines 5-27; page 6, lines 9-28; page 7, lines 4-10). The nonwoven wipe may optionally include, per dependent claim 23, an intermediate layer (16) to abate penetration of the adhesive binder from one outer surface to the other (see Specification, page 3, lines 9-16; page 6, lines 29-31; page ;7, lines 1-3).

Grounds of Rejection to be Reviewed On Appeal

The issues in this Appeal are:

(1) whether pending claims 22-28 comply with 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement;

(2) whether pending claims 22-28 comply with 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement;

(3) whether pending claims 22-28 comply with 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as his invention;

(4) whether claims 22, 24, 25, and 28 comply with the requirements of 35 U.S.C. §102, as being anticipated by, or in the alternative, under 35 U.S.C. §103(a), as being obvious over U.S. Patent No. 6,103,061, to Anderson et al.;

(5) whether claim 23 complies with the requirements of 35 U.S.C. §103 in view of U.S. Patent No. 6,103,061, to Anderson et al., in view of U.S. Patent No. 4,810,568 to Buyofsky et al.;

(6) whether claims 26 and 27 comply with the requirements of 35 U.S.C. §103 in view of U.S. Patent No. 6,103,061, to Anderson et al., in view of U.S. Patent No. 5,951, 991, to Wagner et al.; and

(7) whether claims 22-28 comply with the requirements of 35 U.S.C. §103, in view of U.S. Patent No. 6,022,818, to Welchel et al., in view of U.S. Patent No. 5,213,588, to Wong et al.

Argument

Introduction

The present invention concerns a nonwoven fabric wipe having adhesive binder applied to one expansive surface thereof, whereby one surface of the wipe is more abrasive than the other to facilitate use. It is respectfully submitted that applicant's application clearly teaches those skilled in the art how to form a bi-functional wipe in accordance with the present invention. It is further respectfully submitted that the prior art is clearly deficient in teaching or suggesting applicant's invention, in that not one of the cited prior art references teaches or suggests selective application of an adhesive binder to one surface of a wipe in order to render that surface of the wipe meaningfully more abrasive than the other.

Rejections Under 35 U.S.C. §112

In the Examiner's Action, dated April 18, 2005, he has rejected the pending claims under 35 U.S.C. §112, alleging failure to comply with the written description requirement, and the enablement requirement (§112, first paragraph), and asserting the claims are indefinite (§112, second paragraph).

During prosecution, applicant revised his pending claims to specify that a wipe according to his invention "exhibits a frictional coefficient differential between opposite expansive surfaces thereof of at least 0.05". Prior to introduction of this claim language, the Examiner had determined that applicant's application complied with the requirements of 35 U.S.C. §112.

During prosecution, this claim language was added in an effort to distinguish applicant's invention from the prior art, which has no teachings regarding selectively enhancing the abrasiveness of one surface of a wipe by application of an adhesive binder thereto. In an effort to quantify the level of abrasiveness achieved, applicant revised his claim language to specify a "frictional coefficient differential", consistent with the extensive test data set forth in his application of samples formed in accordance with the present invention (samples of the present invention had been previously delivered to the Examiner).

In the Action, the Examiner has stated that the Specification does not "indicate that measurements of frictional coefficient were taken on opposite expansive surfaces". Applicant respectfully disagrees. At page 16, detailed test protocol is set forth for frictional testing of nonwoven fabrics. As noted, at line 14 *et seq.*, "a weight (mounted with a sample) rests on a surface (*also mounted with a sample*) making an angle" to the surface. In other words, this test protocol *tests like surfaces of two samples of the same fabric*. In effect, *each surface is tested against "itself"*.

This is reflected in the test data set forth a page 17, which makes reference to "top nwf" (top nonwoven fabric), "rough" (the rough surface of the sample), with further reference to "bottom nwf" (bottom nonwoven fabric), again with reference to "rough". As is clearly apparent, the test protocol is testing for the frictional coefficient of the "rough" (i.e., abrasive) surface of the sample. In connection with Sample A, the frictional coefficient is 1.09.

In contrast, the "soft" surface of each sample was tested against the "soft" surface of a like sample to determine the frictional coefficient of that surface. In the case of Sample A, the frictional coefficient of the soft surface of the sample was 1.04.

Thus, Sample A exhibits a frictional coefficient differential 0.05.

It is respectfully submitted that those skilled in the art will fully understand the test protocol for establishing the resultant "frictional coefficient differential" of a tested sample. Thus, it is believed that the rejections under 35 U.S.C. §112, for failing to comply with the written description requirement, and for failure to comply with the second paragraph of §112, are error and should be withdrawn.

In rejecting the claims under 35 U.S.C. §112, for failure to comply with the enablement requirement, the Examiner has stated that there is "no teaching . . . . provided as to how much binder and what type of binder should be used with any given sample fabric to provide the claimed coefficient differential". Prior to introduction of this claim limitation, the Examiner acknowledged that applicant's claims met the enablement requirement of 35 U.S.C. §112. These claims specified enhancing the surface abrasiveness of one surface of a nonwoven fabric wipe by application of only a binder composition to that one of the surfaces, to thereby provide an enhanced coefficient of friction (see Official Action mailed March 29, 2004, in which the Examiner withdrew previous rejections under 35 U.S.C. §112).

In this context, and particularly given the extensive teachings regarding fabric formation and frictional testing protocol, it is respectfully submitted that applicant's specification, including the presently pending claims, fully complies with the requirements of 35 U.S.C. §112. The Examiner has previously, specifically acknowledged that applicant's disclosure is enabling for providing enhanced abrasiveness of one surface of a wipe by application of a binder to that surface. In accordance with M.P.E.P. Section 2164.01, the "test of enablement" is in accordance with the Supreme Court's inquiry: is the experimentation needed to practice the

invention undue or unreasonable? Clearly, in the present case, any experimentation needed to practice the invention *is not* undue or unreasonable. The Examiner has specifically acknowledged that those skilled in the art can practice applicant's invention as claimed, wherein one surface thereof has binder applied thereto to enhance its abrasiveness, providing an enhanced coefficient of friction. For one skilled in the art to selectively vary the type and quantity of binder applied, to achieve the specified level of difference in frictional coefficient, would clearly entail no more than routine experimentation and sampling.

M.P.E.P. Section 2164.01(a) lists factors to be considered in evaluating the question of whether "undue experimentation" is required. Briefly touching on these factors: (a) the breadth of the claims; *the presently pending claims are specific in scope and breadth*; (b) the nature of the invention; *the present invention is an improvement to nonwoven wipes, which are known to those skilled in the art*; (c) the state of the prior art; *generally, the art of nonwoven fabrics is well-developed*; (d) the level of one of ordinary skill; *those skilled in this art area are relatively sophisticated, and familiar with the diverse teachings of the art*; (e) the level of predictability of the art; *those skilled in the art recognize a degree of predictability achieved attendant to varying production parameters*; (f) the amount of direction provided by the inventor; *applicant's specification provides detailed and extensive teachings regarding fabric formation and testing*; (g) the existence of working samples; *a number of extensively tested samples are set forth in the Specification, consistent with samples submitted to the Examiner*; and (h) the quantity of experimentation needed; *only limited experimentation, if any, would be required to form bi-functional wipes in accordance with applicant's invention.*

Accordingly, it is respectfully submitted that the rejection under 35 U.S.C. for lack of enablement is in error and should be withdrawn.

Rejection Of Claims 22, 24, 25, and 28 Under
35 U.S.C. §102(e)/§103, Anderson et al. U.S. Patent No. 6,103,061

Applicant respectfully submits that Anderson et al. fails to teach or suggest his invention as claimed. Indeed, Anderson et al. can readily be construed as *teaching away* from applicant's invention, in that Anderson et al. contemplates a *softened* composite material (column 3, lines 26-27) made by applying a bonding material to a web, followed by *mechanical creping to soften the web* (column 3, lines 8-25).

Applicant must respectfully maintain that Anderson et al. is *completely silent* of any teachings regarding *selectively enhancing abrasiveness* of one surface of a nonwoven fabric wipe, with *no suggestion* of creating a frictional coefficient differential, as quantified by applicant's claims. Applicant must respectfully maintain that relying upon the insufficient teachings of Anderson et al. fails to comply with the requirements of the M.P.E.P. in assessing patentability.

The Examiner refers to "boilerplate-type language" in Anderson et al. specifying "applying a bonding material to at least one side of the web" (column 2, line 34). Anderson et al. goes on to state: "the bonding material may be applied to the first side of the web and a second and opposite side of the web" (column 2, lines 59-60), clearly indicating that application of the bonding material *only to one side* is not the thrust of this patent's teachings. Again, Anderson et al. then contemplates that the one or both sides of the web to which bonding material is applied are *mechanically creped to soften the web.*

M.P.E.P. Section 2112 specifically sets forth the requirements for finding inherency, specifying that:

> The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherence of that result or characteristic.

And the M.P.E.P. goes on to caution that:

> Inherency, however, may not be established by probabilities or possibilities, the mere fact that a certain thing may result from a given set of circumstances is not sufficient.

Applicant maintains that Anderson et al. *teaches away* from his invention. This is clearly evident from the fact that Anderson et al. contemplates the inclusion, subsequent to softening by mechanical creping, of a *friction reducing agent* in the disclosed fabric structure.

At column 10, lines 33-35, Anderson et al. states:

> Once applied to the web, the friction reducing composition increases the smoothness of the surface ot the web and *lowers friction*.

Thus, the primary Anderson et al. reference not only clearly fails to teach or suggest selectively enhancing the abrasiveness of one surface of a bi-functional nonwoven wipe, by selective application of an adhesive binder, the thrust of the teachings of this reference concerns *softening both surfaces* of a wipe by mechanical creping, with inclusion of a friction-reducing composition intended to "increase smoothness" and "reduce friction". Clearly, this reference simply cannot be reasonably relied upon in properly rejecting the presently pending claims under 35 U.S.C. §102 or §103.

Rejection Of Claim 23 Under 35 U.S.C. §103(a),
Anderson et al. In view of Buyofsky et al.

In the Action, the Examiner acknowledges that the principal Anderson et al. reference fails to teach the provision of an "intermediate layer", in accordance with applicant's claim 23, and thus cites the Buyofsky et al. patent.

Applicant must respectfully maintain that, even when combined, these references clearly fail to teach or suggest this claimed structure. As discussed at pages 6-7 of his specification, the optional provision of an intermediate layer in applicant's wipe structure desirably acts to create a *barrier between the outer layers*, thus permitting the application of a binder

composition to the second surface provided by the second layer, while *abating penetration of the binder composition* to the first outer layer.

Clearly, Anderson et al. is completely silent as to any such teachings. It is respectfully submitted that Buyofsky et al., which discloses a method of making a reinforced fabric laminate, clearly fails to teach or suggest the provision of an "intermediate layer" in accordance with claim 23. Indeed, the Examiner has cited Buyofsky et al. as teaching the provision of a reinforcement layer "which offers dimensional stability to the composite", yet does not identify any teachings in Buyofsky et al. which would teach or suggest the provision of an intermediate layer for *controlling binder migration*, as disclosed in applicant's specification.

Accordingly, it is respectfully submitted that this rejection should be withdrawn, and moreover, that claim 23 recites patentably distinct subject matter.

Rejection Of Claims 26 And 27 Under 35 U.S.C. §103
Anderson et al. In View of Wagner et al.

The Wagner er al. U.S. Patent No. 5,951,991 clearly fails to overcome the deficiencies in the teachings of Anderson. Therefore, it is respectfully submitted that the rejection of the pending claims based upon Anderson et al., or Anderson et al. in view of Wagner et al., is in error and should be withdrawn.

At column 8, lines 40-43 of Wagner et al., it states:

> In addition, separate layers of the substrate can be manufactured to have different colors, thereby helping the user to further distinguish the surfaces.

Clearly, this generalized teaching in Wagner et al. fails to overcome the deficiencies in the primary Anderson et al. reference of teaching selectively enhancing the abrasiveness of one surface of a nonwoven wipe construct, and clearly does not teach or suggest applicant's invention as set forth in claim 27, wherein a color difference between the opposite expansive surfaces is provided by employing a *colored binder*. Thus, these claims are believed to set

forth additional structural features of the present invention which provide an additional basis for patentability.

Rejection Under 35 U.S.C. §103, U.S. Patent No. 6,022,819, to Welchel et al., In View of U.S. Patent No. 5,213,588, to Wong et al.

Applicant previously had noted that Welchel et al. has *no teachings* of configuring the disclosed composite to exhibit *differing abrasiveness* on the opposite surfaces thereof. The Examiner specifically acknowledges "Welchel et al. do not teach applying an abrasive coating to the fabric for cleansing purposes".

The Welchel et al. reference *is not* concerned with providing a bi-functional wipe, having differing abrasive characteristics, but rather concerns "a fluid management component in personal care absorbent articles such as diapers, training pants, incontinent products, feminine hygiene products, bandages, wipes, and the like" (column 1, lines 17-20). Clearly, *fluid management* is the principal thrust of the disclosed material.

As noted by the Examiner, Wong et al. discloses adding *abrasive particles* to a coating to nonwoven wiping materials. Implicitly, the Examiner acknowledges that Wong et al. *fails to teach enhancing abrasiveness by application of an adhesive binder.*

The Examiner specifically acknowledges that "Wong et al. do not explicitly teach the limitation of a frictional coefficient differential between opposite expansive surfaces". Clearly, Wong et al. fails to overcome the clear deficiencies in the principal Welchel et al. patent. *Neither patent teaches enhancing abrasiveness of one surface of a nonwoven fabric by application of an adhesive binder thereto.* M.P.E.P. Section 2143.03 specifically requires that "all claim limitations must be taught or suggested". Since neither Welchel et al. or Wong et al. teach applicant's invention as claimed, as specifically acknowledged by the Examiner, it is respectfully submitted that this rejection should be withdrawn.

Conclusion

It is respectfully submitted that the presently pending claims fully comply with the requirements of 35 U.S.C. §102, §103, and §112, and accordingly, formal allowance is respectfully solicited.

The Commissioner is hereby authorized to charge any additional fees which may be required in connection with this submission to Deposit Account No. 23-0785.

Respectfully submitted,

By_____
Stephen D. Geimer, Reg. No. 28,846

WOOD, PHILLIPS, KATZ, CLARK & MORTIMER
500 West Madison Street, Suite 3800
Chicago, Illinois 60661-2511
312/876-1800

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service with sufficient postage at First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on **May 16, 2006**.

CLAIMS APPENDIX

Listing of Claims:

Claims 1 - 20 (canceled).

Claim 21 (canceled).

Claim 22 (previously presented). The nonwoven fabric wipe of claim 28, wherein the fibrous matrix has a first layer, which has the expansive surface not having the binder applied thereto, and a second layer, which has the expansive surface having the binder applied thereto.

Claim 23 (previously presented). The nonwoven fabric wipe of claim 22, wherein the fibrous matrix comprises an intermediate layer between the first and second layers, the intermediate layer abating penetration of the binder to the first layer.

Claim 24 (previously presented). The nonwoven fabric wipe of claim 28, wherein the binder is applied in a pattern.

Claim 25 (previously presented). The nonwoven fabric wipe of claim 24, wherein the binder is applied in a sprayed or scattered pattern.

Claim 26 (previously presented). The nonwoven fabric wipe of claim 28, wherein the expansive surfaces have different colors.

Claim 27 (previously presented). The nonwoven fabric wipe of claim 26 , wherein the expansive surface having the binder applied thereto has a different color based on a colored binder, as compared to the expansive surface not having the binder applied thereto.

Claim 28 (presently presented). A bi-functional, nonwoven fabric wipe, which is made by the process which comprises the steps of:

(a) providing a hydroentangled fibrous matric having two opposite expansive surfaces, and

(b) enhancing the surface abrasiveness of a given one of the expansive surfaces, as compared to the surface abrasiveness of the other one of the expansive surfaces, by applying

only a binder composition to the given one of the expansive surfaces, whereby the expansive surface having only the binder applied thereto has an enhanced coefficient of friction, as compared to the coefficient of friction of the expansive surface not having the binder applied thereto,

wherein said nonwoven fabric wipe exhibits a frictional coefficient differential between the opposite expansive surfaces thereof of at least about 0.05, said one of said expansive surfaces having only said binder applied thereto exhibiting a greater frictional coefficient than the other one of said expansive surfaces.

EVIDENCE APPENDIX

Appended hereto is a copy of the Affidavit of Dianne B. Ellis (4 pages), submitted by facsimile transmission on October 4, 2003.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Mou-Chung Ngai	)	
		)	
Serial No.:	09/997,673	)	Jeremy R. Pierce,
		)	Patent Examiner,
Filing Date:	November 29, 2001	)	Art Unit 1771
		)	
Docket No.: PGI6044P0231US		)	

AFFIDAVIT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

A copy of my *curriculum vitae* is attached, which demonstrates my expertise in the art of nonwoven fabrics. Having familiarized myself with the specification of United States Patent Application Serial No. 09/997, 673, as filed, I am addressing the following questions, which the examiner has raised:

> Claim 1 recites a binder composition that enhances surface abrasiveness of a surface. How does the binder composition enhance surface abrasiveness? Is the binder composition itself formed of material that is abrasive? Does the binder composition only act to stiffen the fibers of the nonwoven surface? What type of binder is required to meet the abrasiveness requirement?

As I interpret the specification, the specification teaches that, if a binder is applied to one expansive surface of a nonwoven fabric wipe having a hydro-entangled, fibrous matrix, but not to the other expansive surface, the binder, where applied and when cured, forms surface junctions in the fibrous matrix at the expansive surface having the binder applied thereto and, consequently, enhances surface abrasiveness of the expansive surface having the binder applied thereto, as compared to surface abrasiveness of the other expansive surface, to which the binder is not applied.

Implicitly, if not explicitly, the specification teaches that such enhancement of surface abrasiveness results from the binder forming surface junctions in the fibrous matrix and does not depend upon the binder being abrasive, having any particular composition, or being of any particular type. I would expect persons of ordinary skill in the art of nonwoven fabrics, once taught by the specification, to be readily able to select a suitable binder, whether hard or soft, which might be a polymeric binder of any of various types used commonly in nonwoven fabrics.

Respectively submitted,

By Dianne B Ellis

DIANNE B. ELLIS
[Typed or Printed Name]

State of North Carolina)
) ss
County of ~~Iredell~~ Johnston)

Subscribed and sworn to, before me, on 9/24, 2003.

Mary W. Walker
[Notary Public]

100 Chimo Court
Cary, NC 27513
Phone 91-319-9079

Dianne Ellis

Education

1979-1981 University of Dallas Irving, TX
- Chemistry major

1981-1984 West Virginia University Morgantown, WV
- B.S. Chemistry

1988-2001 Meredith College Raleigh, NC
- M.B.A.

Professional experience

1984-1987 Coopervision / Cilco Sanford, NC
- Research Chemist

  Developed alternate method for purification of critical raw material. Developed two new products for use in eye surgery.

1987- Present PGI Nonwovens Benson, NC
- Quality Assurance Supervisor

  Responsible for the day to day operation of four testing labs on off shift. Coordinate work schedules. Coordinate specifications. Created system for compliance with GMPs.

- Quality Engineer

  Responsible for the day to day operation of three labs. Validate all specifications. Created computerized network system for lab data. Responsible for complaint resolution. Develop and implement supplier quality system.

- Senior Quality Engineer

  Responsible for the day to day operation of three labs. Develop and implement system for Certificates of Analysis. Validate all specifications. Responsible for managing supplier quality system.

- Quality Manager

  Responsible for the day to day operation of three labs. Responsible for achieving ISO 9001:2000 registration. Responsible for specification and data collection systems.

- Project Coordinator

  Responsible for coordinating the development activities between product development and plant personnel for new development for key commercial customer. Coordinate the transfer of key products between production lines and facilities. Coordinate technical aspects of product to include recipe / formulation changes. Identify, develop, and implement raw material changes to meet customer requirements.

- Logistics Manager

  Responsible for purchasing, warehouse, and logistics functions for plant. Manage capacity loading for facility. Responsible for improving on time shipments by 20%.

- Senior Scientist

  Responsible for the development of new wiping products for key customer accounts to include commercial and industrial wipes. Identify, develop, and implement various binder / chemical systems for specific end use applications. Responsible for the development of all PGI Branded Wipes including raw material selection to meet end product requirements. Responsible for transfer of existing wipes products for key customers between lines and facilities.